

**IN THE UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF ILLINOIS**

MELISSA CALUSINSKI, REG. NO. R88005,

PETITIONER,

v.

GLEN AUSTIN, WARDEN,
LOGAN CORRECTIONAL CENTER,

RESPONDENT.

CASE NO. 1:19-CV-02122

Lake County, Illinois
Case No. 09-CF-252

**MEMORANDUM IN SUPPORT OF
PETITION FOR WRIT OF HABEAS CORPUS**

Now comes Petitioner, Melissa Calusinski, by and through her attorneys, Kathleen T. Zellner & Associates, P.C., and respectfully submits this memorandum in support of her petition for writ of habeas corpus pursuant to 28 U.S.C. § 2254.

INTRODUCTION

Petitioner Melissa Calusinski (“Melissa”) stands wrongfully convicted pursuant to a state-court judgment of conviction. Her sentence, conviction, and confinement are unlawful and were unconstitutionally obtained in violation of her Fourteenth Amendment rights. Melissa was denied her right to due process as secured by the Fourteenth Amendments during the course of the proceedings that resulted in her conviction.

In particular, this federal habeas petition asserts two claims. The first claim asserts that Melissa’s Fourteenth Amendment right to due process was violated when the State failed to disclose material, exculpatory x-ray images prior to trial.

The second claim asserts that Melissa's Fourteenth Amendment right to due process was violated when the State suborned the perjury of a medical consultant.

As a result of these constitutional violations, Melissa was convicted. Melissa respectfully requests that this Court issue a writ of habeas corpus ordering that she be brought before the Court to be discharged from her unconstitutional confinement and relieved of her unconstitutional conviction and sentence.

STATEMENT ON TIMELINESS

Pursuant to 28 U.S.C. § 2244(d), petitions for a writ of habeas corpus under 28 U.S.C. § 2254 are subject to a one-year statute of limitations. Melissa's concurrently filed Petition for Writ of Habeas Corpus is timely. In support thereof, Melissa states as follows:

28 U.S.C. § 2244(d)(1)(A) provides the one-year period of limitation applicable to a petition for writ of habeas corpus by a person in State custody runs from the latest of the date of which the judgment became final by the conclusion of direct review or the expiration date of the time for seeking such review.

Melissa was convicted on November 16, 2011. The trial court denied Melissa's motion for new trial on February 23, 2012.

On March 1, 2012, Melissa filed a motion to reconsider the sentence. The trial court denied Melissa's motion to reconsider on March 29, 2012.

Melissa timely filed a notice of appeal on March 29, 2012 and filed her direct appeal on May 17, 2013. The Illinois Court of Appeals denied Melissa's direct

appeal on February 19, 2014. Melissa filed a petition for rehearing in the Illinois Court of Appeals on March 12, 2014, which was denied on April 22, 2014.

Melissa filed a petition for leave to appeal in the Illinois Supreme Court on May 27, 2014, which was denied on September 24, 2014. Melissa's conviction became final for purposes of federal habeas review at the end of the 90-day period she could have filed a petition for writ of certiorari to the United States Supreme Court. Thus, Melissa's conviction became final on December 23, 2014. The one-year statute of limitations started running on this date.

Melissa filed her post-conviction petition in the State circuit court on June 23, 2015. This petition tolled the one-year federal habeas clock, with 182 of the 365 days having lapsed. Melissa's petition for leave to appeal the denial of her post-conviction petition was denied by the Illinois Supreme Court on September 26, 2018. Thus, Melissa had 183 days from September 26, 2018, to file her petition for writ of habeas corpus in the federal district court.

Melissa's habeas petition is therefore due March 28, 2019. Melissa's concurrently filed Petition for Writ of Habeas Corpus is therefore timely.

STATEMENT OF FACTS AND PROCEDURAL HISTORY

Statement of Facts

Incident and Investigation

On January 14, 2009, 16-month-old B.K. died from a head injury while attending a local daycare center. When daycare staff called 911, they reported B.K. "foaming," "not breathing," and repeatedly vomiting while receiving CPR

from the daycare staff. (Peo. Tr. Ex. 17 at 1–3; R.2724).¹ Daycare staff informed dispatch that B.K. had been throwing up two days earlier and did not attend daycare the previous day. Police and paramedics arrived at the daycare center approximately three minutes after the 911 call, and B.K. was transported to the hospital, where he was pronounced dead approximately 55 minutes later. (Peo. Tr. Ex. 4; Peo. Tr. Ex. 16).

B.K. had a habit of throwing himself back and hitting the back of his head hard on whatever surface he was sitting. (R.2679–80, 2927, 2988–89, 3076, 3086). Sometimes B.K. did this behavior with enough force to injure himself. (R.2927–28).

On October 27, 2008, B.K. awoke from his nap at daycare with a “large bump” (also described as a large, goose-egg-like swollen bump that was the size of a golf ball (R.2902, 4137)) on the back of his head. (R.2901). Daycare staff told B.K.’s mother about the bump and B.K.’s mother took B.K. to see a physician on October 29. (R.2678–82). The physician visually inspected the bump and felt the area with her fingers. (R.3147). The area was still visibly swollen. (R.3147).

Then, on November 20, 2008, B.K.’s mother brought B.K. to another physician, Dr. Lum, complaining B.K. was spitting up and that he was “not quite himself.” (R.4077). Dr. Lum assumed B.K. was suffering from acid reflux.

¹ Citations to the report of proceedings appear as “R.[page number(s)].” Citations to the People’s trial exhibits appear as “Peo. Tr. Ex. [number] at [page number(s)].” Citations to post-conviction exhibits appear as “[Peo./Pet.] PC Ex. [number] at [page number(s)].” References to the Illinois Court of Appeals’ opinions appear with their IL App (2d) reporter citations. Citations to the trial court’s order denying post-conviction relief appear as “Tr. Ct. P-C Op. at [page number(s)].” Petitioner shall make reference to the concurrently filed appendix where appropriate.

(R.3176). At Melissa’s trial, Dr. Lum testified “repeated vomiting can be a sign of concussion, it can be a sign of increased cranial pressure, so repeated vomiting merits further inquiry as to what the nature of the vomiting is.” (R.4094–95).

In the first year of his life, B.K.’s head circumference was around the 50th percentile. (R.3136–37). On December 1, 2008, B.K.’s head circumference increased to the 75th percentile. (R.3136–37). By the time of his death, B.K.’s head measured in the 95th percentile for children his age. (R.3614, 4092).

Despite B.K.’s injury on October 27, 2008, and his history of throwing back his head, no physician ever performed a CAT, CT or MRI scan to determine whether B.K. had a chronic pre-existing condition. (R.3179). No radiologist was ever consulted about B.K.’s head injuries before January 14, 2009.

B.K.’s mother testified at Melissa’s trial that, on January 12, 2009, B.K. vomited four or five times at daycare and at home. (R.2649, 3323). Another daycare provider testified they saw B.K. vomit four to six times, about five to ten seconds apart, while Melissa was holding him. (R.4354–56). The next day, B.K. stayed home from daycare. (R.2651–55).

On January 14, 2009, no fewer than six daycare providers cared for B.K. (R.2605–06, 2732–33). One of the providers saw B.K. throw himself backwards. (R.3075). Later, while Melissa was out of the room, another daycare provider, Nancy Kallinger (“Nancy”), saw B.K. throw his head back hard against the tile floor and cry. (R.3074–75, 3084). Nancy sat B.K. upright; shortly thereafter, he

was lying on the ground again. (R.3076). Nancy picked B.K. up and placed him in a bouncy chair, where he immediately become lethargic. (R.3076).

Melissa returned to the room and tried to rouse B.K. She called B.K.'s name three times but he did not respond. Melissa called for help and other daycare providers entered the room. (R.3207–13). B.K. was sitting in the bouncy chair and foaming from his nose. (R.4146–48). Other daycare providers began CPR on B.K. (R.2907, 3054–57, 4149). The daycare director called 911 and police and emergency responders arrived at the scene shortly thereafter. B.K. was transported to the hospital, where he was pronounced dead.

On January 15, 2009, Dr. Eupil Choi (“Dr. Choi”) conducted the first autopsy of B.K. (R.3559, 3562–63). Externally, there were only two small bruises on B.K.'s body, one on his forehead and one on his right upper arm. (R.3565–68, 3616). B.K.'s internal organs were normal. (R. 3569–73). The only evidence of injury appeared on B.K.'s head and brain. (R.3573). His spine was intact, he suffered no epidural hematoma, and there was no bruising around his neck, back, shoulders, legs, or buttocks. (R.3613–16). There was also no evidence of optic nerve bleeding. (R.3536, 3615).

Dr. Choi observed a bluish-red area on B.K.'s scalp. (R.3597; Peo. Tr. Ex. 34). There were no cuts or abrasions. (R.3597). Below the skin but above the skull, Dr. Choi noted a subgaleal hemorrhage measuring approximately four inches by four inches. (R.3574–77; Peo. Tr. Ex. 38). Dr. Choi testified there was a 0.8-inch simple linear skull fracture that was visible from the upper and inner

tables of the skull. (R.3580, 3585–86). Dr. Choi discovered blood beneath B.K.’s skull. Namely, there was blood in the dura (membrane directly below the skull), the arachnoid membrane (below the dura), and the subarachnoid membrane (below the arachnoid). (R. 3462, 3580, 3588, 3590–94, 4277; Peo. Tr. Ex. 43). The blood was only present on the right side of the brain. (R. 3588, 3590).

That day, Melissa was interrogated by Investigators Filenko and Curran. (R.3824). DVD recordings of the interrogation were admitted and published to the jury. (R.3836). The interrogation began at 9:35 a.m. and lasted over nine hours. (R.3834).

On January 16, 2009, Dr. Manuel Montez (“Dr. Montez”), a non-board-certified pathologist, arrived at the Lake County Coroner’s office to examine B.K.’s body. (R.4517–18). Dr. Montez performed an unorthodox, unreported, undocumented, unphotographed, and undisclosed examination of B.K.’s body, brain, and skull. (R.4518–29). Dr. Montez described his examination as a “curbside consult.” (R.4557). However, according to Dr. Montez, he went beyond simply consulting and performed an examination of the entire body. Based on his exam, Dr. Montez concluded that B.K. suffered “violent trauma” to his head that was not self-inflicted. (R.4519; 4554).

Over the course of Melissa’s interrogation, the Detectives repeatedly informed Melissa that it was a “medical fact” that someone harmed B.K., that the person did so immediately before he went unconscious, that she was present when it happened, and that she was involved in causing the injuries. (E.g., Peo.

Tr. Ex. 55 at 45–46, 48, 50, 52–53, 58, 65–66, 88, 103–04). Despite telling Melissa that it was a “flat out murder” (Peo. Tr. Ex. 55 at 65–66) the Detectives strongly encouraged her to say she caused B.K.’s injuries by “accident.” (E.g., Peo. Tr. Ex. 55 at 45–49, 82, 88, 93). They specifically suggested that she dropped B.K. (Peo. Tr. Ex. 55 at 45, 53, 81, 88, 94–95). The Detectives also explained that the law treats accidents differently than intentional acts. (E.g., Peo. Tr. Ex. 55 at 45–49, 82, 93, 96, 101–02, 117, 119–20, 130). Melissa repeatedly denied causing any harm to B.K., accidentally or otherwise. (E.g., Peo. Tr. Ex. 55 at 45, 47–54, 58, 62–64, 72–73, 82–83, 94–99, 118). At about 1:30 p.m., Melissa stated that B.K. hit his head hard on the floor after falling from a crossed-legs seated position, as he had a history of doing, while another day care worker was in the room. (Peo. Tr. Ex. 55 at 108, 111).

As the interrogation continued, Melissa continued to proclaim her innocence. The detectives refused to accept her denials. (E.g., Peo. Tr. Ex. 55 at 118). Throughout the course of the interrogation, the detectives were in contact with law enforcement personnel at the coroner’s office. (R.4036–38, 4046–47). As the January 16, 2009, autopsy progressed, the interrogating detectives were apprised of Dr. Choi’s conclusions, the most important of which was the identification of an apparent fracture in B.K.’s skull. Eventually, Melissa acquiesced to the interrogators’ pressure and agreed she had thrown B.K. to the floor. (Peo. Tr. Ex. 55 at 181–82). Melissa was charged with murder in connection to B.K.’s death.

Melissa's defense attorney, Paul DeLuca ("DeLuca"), issued several subpoenas for discovery. (R.5009–16). On September 28, 2009, DeLuca issued a subpoena to the Lake County Coroner's office, requesting "[a]ny and all morgue photographs, histology slides, microscopic reports, microscopic examination of the brain, DC and blood culture report, first call sheet and any and all other notes and/or recordings including any lab results of any items tested regarding the autopsy performed by Dr. Choi on [B.K.], on January 15, 2009." (Pet. PC Ex. 1).

On September 27, 2010, DeLuca issued a subpoena to Dr. Choi for "[his] complete file regarding the autopsy of [B.K.] performed on or about 1/15/09, the complete file to include but not limited to all photographs, all notes, memorandum, or any other documents in said file." (R.5013; Pet. PC Ex. 2). DeLuca received additional documents, but not x-rays. (R.5014).

On December 14, 2010, DeLuca issued another subpoena, this time to Deputy Coroner Paul Forman at the Coroner's office, who was present at the autopsy. (R.5014–15; Pet. PC Ex. 3). DeLuca requested "a copy of Dr. Choi's personal DVD containing photographs taken of the autopsy of [B.K.] on or about 1/15/09." (Pet. PC Ex. 3). DeLuca had learned that Dr. Choi had taken photographs during the autopsy. (R.5015). Again, DeLuca received documents in response to his subpoena, but x-rays were not included in the production. (R.5016).

DeLuca testified that he did not specifically request skull x-rays in these subpoenas because the autopsy report did not refer to any x-rays being taken during the autopsy. (R.5011; Pet. PC Ex. 12).

Because he knew that Dr. Choi identified a skull fracture during the autopsy based upon his review of the autopsy report (Pet. PC Ex. 12), DeLuca suspected that Dr. Choi may have taken x-rays during the autopsy. (R.5012–13). Acting on his suspicion, DeLuca had a conversation with former Assistant State’s Attorney Christen Bishop (“Bishop”) regarding discovery. (R.5014). Specifically, DeLuca asked Bishop if there were any x-rays in the file. (R.5014).

On September 7, 2011, eight weeks before the trial began, Bishop gave DeLuca a disk containing three x-ray images. She represented to the trial court that the images “[were] not legible or readable.” (R.1812–14, 5016, 5036; Pet. PC Ex. 8). Two of the images were of the upper torso, including the skull, and one was of the lower torso. (R.5400; Pet. PC. Ex. 8). Bishop further explained to the trial court that “[the x-rays] are very illegible on the digital.” (R.1813). According to Bishop, the Lake County State’s Attorney’s Office was working with the Coroner’s office to obtain—for use by both the prosecution and defense—readable x-rays. (R.1814, 5017).

On September 7, 2011, after DeLuca received the disk from Bishop, he attempted to open it at his office. (R.5036; 5038). Upon opening the disk on his office computer, DeLuca observed three image files and other icons. (R.5037–38). The first image DeLuca observed showed what appeared to be a white outline of the top of a skull. (R.5037; Pet. PC. Ex. 8). The second image DeLuca observed was very dark, almost to the point of being black. (R.5037). The third image DeLuca observed showed B.K.’s lower torso, from the middle of his waist to his feet. (R.5037). Because

the images appeared dark and illegible, DeLuca asked his secretary for assistance. (R.5037–38). DeLuca attempted to open the other files on the disk, but nothing opened. (R.5038).

On September 9, 2011, the State filed a Supplemental Answer to Discovery (Pet. PC. Ex. 5), which memorialized ASA Bishop’s production of a “[CD] with 3 digital x-ray images, purporting [sic] to be of [B.K.]” and “the program required to view the [x-ray] images,” TigerView, on September 7. (Pet. PC Ex. 5; R.5039). DeLuca and his secretary attempted to open the program required to view the x-ray images, which was called TigerView, but neither of them could open it. (R.5038–39).

Trial

In her opening statement at Melissa’s trial, Bishop argued: “[The] [f]irst proposition we have to show [is] that the Melissa [per]formed an action [that] caused death. We have it. What were the acts? Threw him to the ground. Cracked his head. Fractured.” (R.4713).

At Melissa’s trial, each side called two expert witnesses in their cases-in-chief to testify about B.K.’s injuries and death. All four experts were board certified. (R.3555, 3412, 3695, 4184). The State’s experts, including Dr. Choi, who performed B.K.’s autopsy, testified to the presence of a fracture in B.K.’s skull based upon Dr. Choi’s autopsy findings and photographs. Neither of the State’s doctors reviewed the readable x-ray images in preparation for their trial testimony. None of the State’s experts acknowledged the head-banging incident

that occurred when Melissa was out of the room. It is undisputed that, after that incident, B.K.'s condition changed abruptly from alertness to lethargy.

Dr. Choi did not view histological slides during his autopsy of B.K or before he determined the cause and manner of death. When he looked at the slides taken from B.K.'s dura weeks later, he noted mesothelial cells, calcification, and the presence of iron. The calcification and presence of iron suggest a healing injury. (R.3653–61).

Histological slides are necessary because healing begins at the cellular level—evidence of an older injury cannot be seen with the naked eye. (R.3626). For example, the presence of iron in the blood suggests the blood is at least a few days old, as iron is not present in the blood until after that amount of time. (R.3627). Iron in the blood is not visible to the naked eye. (R.3626). Dr. Choi admitted that iron was present on the slides he reviewed. (R.3660). He testified, “after healing process going on [sic] then eventually [iron] show up. Probably I would say weeks or months, yes.” (R.3661). Dr. Choi also admitted that a minor fall or minor trauma to the area can aggravate a pre-existing chronic subdural hematoma. (R.3663).

Drs. Jan Leestma (“Dr. Leestma”) and Shaku Teas (“Dr. Teas”) testified on behalf of the defense. Dr. Leestma was the only neuropathologist to testify. In accord with Dr. Choi's admission that he cannot say what happened in this case, Dr. Leestma testified that it is pathologically impossible to say how much force was necessary to cause B.K.'s injuries. (R.3739).

Dr. Teas testified to a reasonable degree of medical certainty that B.K. had a chronic subdural hematoma that was weeks and up to months old at the time of his death. (R.4228–29, 4251–52, 4292). Dr. Teas based this conclusion on pathology: her naked eye and microscopic evaluation of B.K.’s blood and tissue revealed chemical and cellular reactions indicative of healing, which typically do not develop for days, weeks, or even months. (R.4214–17, 4228–29, 4239–47, 4292).

Dr. Teas and Dr. Leestma reviewed photographs of the subgaleal hemorrhage taken during the autopsy. Based on their visual examination of these photographs, they concluded that there was a mixture of ages in the subgaleal hemorrhage. (R.3720–21, 4214–17). Some blood was red or black in color, which indicated it was “fresh” (within a few days), while some of the blood was granular and a dark chocolate color which indicated it had undergone a chemical change and was older (between four and seven days). (R.3714–15, 3270–21, 3735–37, 4215–17). Contrary to Dr. Choi’s statement that areas of blood appeared darker because of how the photos were taken and developed, Dr. Teas testified that the darkness was “pretty consistent” from photo to photo. (R.4199–200). Additionally, Dr. Leestma testified that the subgaleal bleeding was diffuse in nature, meaning it took time (several days) to develop to its final size. (R.3716–18, 3720–21). In a blown-up photo of the hemorrhage, Dr. Leestma noted yellowing, which indicated that some blood was a couple weeks or more old. (R.3737, 4219).

Drs. Leestma and Teas testified that slides taken from the subdural hematoma revealed the presence of membrane with enough complexity and layers of fibroblasts to indicate it was between a couple of weeks and months old. (R.3722–23, 3728–29, 3738–39, 4238–39, 4291). This membrane, or “neomembrane,” is synonymous with chronic subdural hematoma—it represents the healing of a subdural hematoma that had been present for weeks or more. (R.3722, 4236–38). Dr. Teas applied pigments to portions of the subdural, revealing the presence of iron and collagen tissue. (R.3726, 4240–41, 4244, 4245–46). Iron appears when the hemoglobin in the red cells break down, which takes five to seven days. (R.3729, 4241). It generally takes several weeks for collagen tissue, which is seen in a scar, to develop to the point demonstrated in the slides. (R.4237, 4245–46).²

When a child has a chronic subdural hematoma, it can re-bleed spontaneously or because of minor trauma, causing excessive pressure in the cranial compartment. (R.4206). If that pressure reaches a certain point, it will cause decompensation. (R.3742). The increased pressure, however, can be compensated for to some extent by the absorption of cerebrospinal fluid. (R.3745). Therefore, the hematoma can wax and wane as it rebleeds and then absorbs fluid. (R.3746–47). During this process, as the pressure increases and begins to reach a dangerous point, a 16-month-old child such as B.K. can display

² In assessing the age of injuries based on histological observations, pathologists, including Drs. Leestma and Teas, utilize the American Monroe Chart, which provides time periods, rather than precise conclusions. (R.4251). It is the “best” study available; it is utilized by pathologists and recognized as an authority in the pathological community. (R. 4284, 4311).

symptoms that are non-specific to brain injury—e.g., repeated vomiting, lethargy, and fussiness—but these symptoms can disappear as the body regulates the pressure. (R.3436–47, 4208). Such children are often able to function and perform complex motor skills because the hematoma is not affecting the brain tissue itself. (R.4208–09).

All the experts agreed that, based on the autopsy findings, they could not pinpoint the timing of B.K.’s injuries. (R.2816, 3440, 3617, 4220, 4562).

The state presented Dr. Montez in rebuttal to make a determination as to the timing, mechanism, and manner of B.K.’s injury. Dr. Montez described his purported examination of B.K.’s skull as follows:

At that time I then after examining the dura in the brain, I went back and looked at the head just to make sure what I was seeing was what I was seeing. Again, I focused this time I went inside out. I focused on the fracture. At the time that I was examining [B.K.], I had gloves on. I took the gloves off because I wanted to touch the fracture itself to make sure it was fresh because it looked fresh to me. I took the gloves off and I touched the inside part of the skull where the edges of the skull fractured [sic] were not completely together. You could feel a ridge there.

The other thing I did I took the skull and moved it. A 16-month-old child still has a pliable skull. It is not completely rigid. What I was able to do is move it, and I saw that fracture itself. The two edges it wasn’t sticky, and stickiness is one of the first signs you see when bones start to mend.

I then stepped back from there and looked at the subgaleal tissue. Again, the area underneath the scalp that is on top of the skull. And I looked at the blood that was collected there. It was dense, packed, fresh blood that was underneath the scalp surface, which was underneath a contusion that was on top of the skull.

(R.4520–21).

I saw this portion of the head. Not only that, I was able to take my hand and touch this portion of the scalp, and it was consistent with a fresh injury. It

was thickened, and packed, and loaded with flesh blood layer after layer in the subgaleal tissues below the scalp.

(R.4541–42).

Dr. Montez testified that he came to the Coroner's office to do a “curbside counsel” on January 16, 2009, in the morning. (R.4575–76). According to Dr. Montez, Forman and Investigator Mike Young were present at the time of his alleged examination of B.K.’s body. (R.4575). Dr. Montez ruled out the existence of a chronic subdural hematoma based upon his visual inspection of the brain. (R.4557). Dr. Montez testified that, based upon his examination of B.K., the skull fracture was new because it did not show any sign of healing. (R.4555).

Dr. Montez went on to describe a “linear fracture which [was] almost an inch long, and it [went] to full thickness of the skull.” (R.4546). According to Dr. Montez, the skull fracture meant that B.K. had been the victim of a violent, intentional throw to the ground with significant force. (R.4536). Dr. Montez ruled out that the head injury was self-inflicted, and he ruled out that it was accidental. (R.4572–73). According to Dr. Montez, B.K. could not have inflicted the skull fracture because he could not have generated the force required to fracture a pliable skull. (R.4572–73).

During closing arguments, the State argued: “The skull fracture. It is a skull fracture. Simple as that . . . Dr. Choi saw it. We talked about what the [d]efense expert said about all these things. It was a skull fracture through and through with blood in between.” (R.4647). The State argued further: “Ladies and gentlemen, use your common sense and experience. This line is a fracture in the skull. You do not need a doctor to see a fracture. What did Dr. Montez say? Remember how he

manipulated the skull? He manipulated the skull. Why? To see how old that was. Look at that red substance in the crack and the two sides. What is that? Fresh blood. That is a fresh fracture.” (R.4716–17).

On November 16, 2011, a jury found Melissa guilty of B.K.’s murder.

Post-Trial Investigation and Proceedings

After Melissa’s trial, DeLuca attempted to open TigerView again. (R.5040). Although he could not open the program on his computer, DeLuca’s secretary was able to open TigerView on her computer. (R.5040). When they tried to enhance the second x-ray image, which showed the head, the entire image appeared white. (R.5040).

DeLuca testified at the hearing on Melissa’s post-conviction petition that he formulated his pre-trial and trial strategy based upon the autopsy finding of Dr. Choi that B.K.’s skull had been fractured. (R.5018–20; Pet. PC Ex. 12). Additionally, DeLuca testified that because Dr. Choi “didn’t take sections of [the skull fracture]” for the purposes of creating histology slides, he could not dispute the existence of the skull fracture absent skull x-rays that showed no fracture. (R.5020). In the absence of x-rays demonstrating there was no fracture, DeLuca had no choice but to proceed with a defense that assumed there was a skull fracture. (R.5018–19).

DeLuca testified about the experts he would have hired had he been provided with readable x-rays of the skull. (R.5020). Specifically, DeLuca would have contacted a pediatric neuroradiologist to determine whether or not there was a skull fracture. (R.5020–21). The pediatric neuroradiologist would have determined there

was no skull fracture, and DeLuca would have been able to refute the testimony of various witnesses, including Dr. Choi, that there was a skull fracture. (R.5021, 5025). DeLuca testified at the evidentiary hearing that Dr. Choi testified at trial that the x-rays were not legible and that he could not identify a skull fracture from the x-rays, but that he knew there was a skull fracture because he had observed it with the naked eye. (R.5021–22).

With a pediatric neuroradiologist confirming there was no fracture, DeLuca could have refuted the accuracy of Melissa's reenactment in the videotaped confession. (R.5021). Although DeLuca discussed the reliability of Melissa's reenactment in the videotaped confession with his medical experts, the experts could not refute the reenactment because they had no legible x-rays. (R.5022–23). DeLuca testified at the evidentiary hearing that, if the medical experts knew that there was no skull fracture, they could have shown that B.K. did not sustain a fatal injury in the manner Melissa demonstrated in her videotaped confession. (R.5023). Therefore, Melissa's confession was false because she could not have injured B.K. in the manner she described. (R.5023).

In 2015, the Coroner's office located and produced legible x-rays of B.K., and DeLuca reviewed them. (Pet. PC Ex. 9; R.5040–41). The 2009 x-rays had been saved in a TIFF file format. (R.5042). The TIFF format is an uncompressed format that, in simple terms, contains all underlying data. (R.5043). DeLuca testified at the evidentiary hearing that the sizes of the JPEG files he received from ASA Bishop on September 7, 2011, were two or two-and-one-half percent of the sizes of the TIFF

image files he viewed in 2015. (R.5042–43). DeLuca testified at the evidentiary hearing that the JPEG files he received before trial were compressed and contained “very little data.” (R.5043).

Jeffrey Mueller (“Mueller”) also testified at the hearing on Melissa’s post-conviction motion. (R.5388). Without objection, Mueller was accepted as an expert in software engineering with a subspecialty in imaging. (R.5398–99; C.1509). Mueller described his background in computer science, and specifically his subspecialty in imaging, which requires a familiarity with all types of images, file formats including JPEG and TIFF files, physics, infrared, and sensor technology. (R.5392–93). He had been hired by commercial and government clients to improve the quality of images. (R.5394–95).

Mueller was familiar with the 2008 and 2013 versions of TigerView Software involved in the case and has used the programs himself. (R.5395–96, 5460–61). He had used the TigerView CD viewer that exports files prior to this case. (R.5480). Mueller explained that there are common characteristics of images including visible light spectrum, infrared, and x-ray. (R.5392). All images have common features of compression and contrast. (R.5392).

Mueller examined the Coroner’s computer. (R.5399). He testified he examined “everything relevant to the [B.K.] files” which included the following items:

“TigerView software itself, the way the images appeared on the Coroner’s computer, any files that were remaining on hard drive of the entire computer . . . specific files to see if there were any remnants . . . the Microsoft database,

which is maintained by the TigerView application itself, which maintains a specific record, detailed record of all images as well as patients.”

(R. 5399).

Mueller also reviewed the three images Bishop gave DeLuca on September 7, 2011, which were in JPEG format (Pet. P.C. Ex. 8; (R.5400, 5486) and the images reviewed by Dr. Teas, which were also in JPEG format. (Pet. PC Ex. 31; R.5400, 5450). Finally, Mueller reviewed the TIFF images on the Coroner’s computer (R.5400–01).

Mueller identified Def. Ex. 8 as the three DeLuca images from the September 2011 disk and the underlying metadata for those images. (Pet. PC Ex. 25). Mueller explained that the three DeLuca images were in JPEG format, meaning they had been compressed “significantly.” (R.5401–02). Image “[B.K.]1,” which was an outline of B.K.’s skull, was a JPEG image compressed to 267 kilobytes. (R.5403; Pet. PC Ex. 25). Image “[B.K.]2” was an image of B.K.’s upper torso and skull and was a JPEG image compressed to 411 kilobytes. (R.5403; Pet. PC Ex. 25). Image “[B.K.]3” was an outline of B.K.’s lower torso. (R.5400).

Mueller identified three TIFF images saved to the Coroner’s computer on January 15, 2009. (Pet. PC Ex. 9). Coroner’s Image 48 was an “uncompressed and highest quality” TIFF image of the lower torso and was acquired on January 15, 2009 and was approximately 17,800 kilobytes in size. (R.5406, 5491). Coroner’s Image 49 is an “uncompressed and highest quality” TIFF image of B.K.’s skull also acquired on January 15, 2009 and was approximately 16,600 kilobytes in size. (R.5407). Coroner’s Image 50 is also an “uncompressed and highest quality” TIFF

image of B.K.'s head that was created on that date and had a file size of approximately 17,200 kilobytes. (R.5407–08). All three of the TIFF images had been on the Coroner's computer since 2009. (Pet. PC Ex. Group 29; R.5409).

Mueller demonstrated for the court a comparison of the DeLuca images in Def. Ex. 8 and metadata of those images (Pet. PC Ex. 25) with the three TIFF images saved on the Coroner's computer in 2009 and recovered in 2015 (Coroner's Images 48, 49, 50).

Mueller, in referring to the Coroner's computer images 48, 49, and 50, offered his expert opinion that there was "absolutely no evidence of [any file being saved in the JPEG format] on the entire hard drive." (R.5409). Therefore, all the files were saved in the TIFF format in 2009, including Coroner's Images 48, 49, and 50 of B.K. (R.5406–08).

Melissa presented Pet. PC. Ex. 39, depicting side-by-side x-ray images with the DeLuca 2011 JPEG images on the left and the Coroner's 2009 TIFF Images 48, 49, and 50 on the right.³ (R.5410–12).

Mueller explained that the 2008 TigerView software in operation in 2011 allowed the user to choose to export the images in either TIFF or JPEG format. (R.5415–18).

Using the 2008 TigerView software which was available in 2011, Mueller was able to improve quality of Coroner's TIFF Image 50 of B.K.'s skull, which was saved on the Coroner's computer in 2009. (R.5415).

³ Both parties' software experts explained that the term TIG extension is a TigerView proprietary file name, but the underlying format is a TIFF file format. (R.5306, 5498) (C.1507).

However, Mueller, using the 2008 Tigerview software,⁴ was not able to improve the JPEG 2011 DeLuca image [B.K.]1, which is the same image as the Coroner's Image 50. (R.5418). Mueller explained that he could not improve the quality of DeLuca's images for a number of reasons, "most specifically [because the file] was exported as a very very low quality JPEG as well as being blanked out like that." (R.5419). Mueller testified that, in addition to being exported as a JPEG, another modification was made to the image prior to being exported. (R.5421–22).

Mueller demonstrated to the court how the very poor quality of the DeLuca image was created prior to being exported as a JPEG. Mueller was able to modify Coroner's Image 50, the 2009 TIFF image with an uncompressed file size of 17,200 kilobytes (R.5423) to the DeLuca [B.K.]1 JPEG image—with a file size of 267 kilobytes—by adjusting the window width to three, so that there were "three shades of grey, so we have basically pure grey or pure white." (R.5426). Mueller then demonstrated that he could choose the JPEG option and could export the file as a JPEG image. (R.5425). For Mueller to obtain the image DeLuca received with the same file size of 267 kilobytes, Mueller had to "reduce the quality down as low as" he could and export in JPEG. (R.5425).

When Mueller viewed the 718 other images on the Coroner's computer, he did not see a single image that had been reduced as severely as the x-ray of B.K.'s skull, Image 50. (R.5427, 5431; Pet. PC Ex. 45). This reduction involved decreasing the window width to three. (R.5427). Mueller testified that there was "no other image with that narrow of a window width." (R.5427). While the B.K. image had a

⁴ 7.0.12 is the 2008 TigerView version. (R.5416).

window width of three, “the window width[s] of the other 718 file images [were] in the thousand[s].” (R.5428).

Mueller was able to access image data from the Coroner’s computer on B.K.’s Images. (R.5432–33, 5434; Pet. PC Ex. 46). Mueller testified that he wanted to analyze the brightness, contrast, gamma, and window width adjustments for the images. (R.5433). Mueller testified that the x-ray of B.K.’s skull, Image 50, had a window width maximum 65,532. (R.5434–35). Mueller testified that the window width maximum for image 50 was reduced to “the minimum that the [graphical user interface] allowed, which was three, that result[ed] in the blank outline.” (R.5435). No modifications to the window width data were made to Image 49, which was an x-ray of B.K.’s upper torso. (R.5435). Image 48, an x-ray of B.K.’s lower torso, had “a contrast adjustment, a brightness adjustment, a window minimum adjustment as well as a gamma adjustment.” (R.5436). Mueller testified that the DeLuca JPEG images were created on September 6, 2011. (R.5436).

Mueller demonstrated for the trial court a comparison of adjusted DeLuca images with the Coroner’s images. (Pet. PC Ex. 40; R.5439–42). The images on the left of Pet. PC Ex. 40 were the JPEG images given to DeLuca; the images on the right were the Coroner’s TIFF images. (R.5441). As previously described, Coroner’s Image 49 was of B.K.’s upper torso and skull, which was labeled [B.K.]2 in DeLuca’s images. (R.5441–42). Mueller testified that he was able to adjust the brightness and contrast of the DeLuca image [B.K.]2, but he was not able to alter the underlying metadata of that image. (R.5443). Mueller testified that the image given to DeLuca

on September 7, 2011 was a “significantly darkened image” as opposed to the image created on the Coroner’s computer in 2009, which was clear and legible—in addition to being a TIFF image 16,600 kilobytes in size. (R.5440; Pet.PC Ex. Group 29). When Mueller adjusted the [B.K.]2 JPEG image given to DeLuca, the metadata did not change. (R.5442–43). In order for Mueller to recreate the image provided to DeLuca, Mueller exported the Coroner’s TIFF image as a “very low quality JPEG . . . then [one] had to use photoshop to darken the image.” (R.5443).

In his demonstration, Mueller attempted to recreate the DeLuca image on the left by exporting the TIFF image on the right of Pet. PC Ex. Group 29 to a JPEG format, resulting in a reduction in the size of the file. (R.5443–44). The size was reduced by half or even as much as three times. (R.5443–44). Mueller could not reduce the file to near the 411 kilobytes until he opened the file in another program and further reduced the quality. (R.5444–45). Mueller concluded that “to a reasonable degree of software engineering certainty and imaging certainty” in addition to being exported in JPEG format, modifications were made to the file eventually tendered DeLuca as [B.K.]2—what was Image 49 on the Coroner’s computer; i.e., someone opened photoshop to recreate the darkness level, and further reduced the quality by exporting it into a JPEG again, while grading down the quality until he was able to obtain a file size of 411 kilobytes. (R.5445). Those adjustments were the only way Mueller could recreate the poor quality of DeLuca’s [B.K.]2 JPEG from the 2009 original TIFF file. (R.5445). With those adjustments,

Mueller was able to reduce the file size to match the size of the DeLuca [B.K.]2 image. (R.5445–46).

Mueller explained that if one could have accessed the Coroner's computer in 2011 and adjusted the image saved in 2009, the image could have been made clearer. (R.5447). Mueller was able to make those adjustments in less than 10 seconds. (R.5447). Even if the image was "totally darkened in TIFF format," as long as it was in TIFF format, it would be "extremely simple" to clarify the image "very quickly." (R.5448).

Mueller had access to the 2008 TigerView CD viewer DeLuca had prior to Melissa's trial. (R.5496). Mueller spent hours trying to improve the JPEG images Bishop gave DeLuca and applied "many different commonatorics [sic] of contrast, brightness [and] window width" and there was "nothing that [he] could do." (R.5496). Mueller tried to improve the quality of the images, although he already knew that he would be unable to improve the images because they were in JPEG format. (R.5496–97). However, Mueller explained, he could spend his "entire life" trying to make the darkened JPEG image on the disk given to DeLuca the same and he could not do so. (R.5447–48).

Mueller also reviewed the x-rays provided to Dr. Teas. (R.5448–50). Mueller testified that those three Dr. Teas x-rays were in the JPEG format. (R.5450). (Pet. PC Group Ex. 31.) Like the images DeLuca received, the file size had been reduced on those images. (R.5451). In fact, the [B.K.]2 image that Dr. Teas reviewed actually

had a lower file size (200 kilobytes) than the [B.K.]2 image DeLuca received (411 kilobytes). (R.5442–43).

On cross-examination, Mueller denied altering the data on the Coroner's computer during the forensic exam. (R.5460). On the older version of the TigerView software, the user could choose to export images in TIFF or JPEG file formats. (R.5468, 5500). If the user did not specifically select the TIFF file format when exporting, the TigerView software defaulted and exported images as JPEG files. (R.5468). The newer versions defaulted to TIFF format. (R.5470).

Mueller explained that if one were to alter that image at any time, there would be a record of the alteration. (R.5489). Thus, if Mueller had altered any data on the Coroner's computer during his examination of the computer, there would have been a record of the changes. The State did not produce any record of changes made during Mueller's examination of the Coroner's computer. Mueller did not alter any images whatsoever, he simply copied the existing images from the Coroner's computer. (R.5492).

Mueller testified that he analyzed the entire hard drive and there was no evidence on the Coroner's computer that any images were in JPEG format. (R.5493, 5499). He explained that one could export in JPEG in order to email a file or put it on a thumb drive of small capacity. (R.5494). However, the 2009 images in this case were copied directly onto a CD, which has a capacity of approximately 700 megabytes. (R.5494–95). Therefore, Mueller explained, all three TIFF images could have easily been put on a CD. (R.5495).

Mueller testified that from January 15, 2009 forward, the TIFF images of B.K. were always saved on the Coroner's computer. (R.5498). Mueller testified that "[t]hey had the highest quality images available." (R.5498). Mueller testified that one could choose to export the images in a TIFF format or in a JPEG format. (R. 5500).

Dr. Robert Zimmerman ("Dr. Zimmerman") testified for Melissa at the evidentiary hearing as an expert in pediatric neuroradiology. (R.5114, 5116). Dr. Zimmerman is the Chief of Pediatric Neuroradiology at the Children's Hospital of Philadelphia (R.5114), is a member of the American College of Radiology Section on Neuroradiology, and was a consultant to the American Academy of Pediatrics Subcommittee on Head Injury. (Pet. PC Ex. 19). Dr. Zimmerman is board certified in radiology, diagnostic radiology, and neuroradiology. (Pet. PC Ex. 19). He explained that through application of the principles of neuroradiology, one can ascertain whether trauma to a victim is accidental or abusive. (R.5117–18). A linear fracture in the occipital parietal area of the skull is associated with an "impact injury" where the occiput is hit against the ground in a forceful manner. (R.5118). Abusive head traumas cause fractures. (R.5118). The absence of a fracture would "go against" a diagnosis of abusive head trauma. (R.5118). The lack of a skull fracture points to a self-inflicted or accidental head trauma. (R.5118).

Dr. Zimmerman reviewed Melissa's videotaped confession prior to the evidentiary hearing. (R.5119). He explained that the reenactment on the video as to what Melissa did to B.K. is not consistent with a linear skull fracture. (R.5119–20).

The occiput (back) of the head did not hit the ground in the reenactment. (R.5120). Had B.K. been thrown as depicted on the video, Dr. Zimmerman explained, the fracture would have been in the front of the head. (R.5120).

Dr. Zimmerman reviewed Pet. PC Ex. 1 and explained that the image would not allow him to diagnose a skull fracture. (R.5121). No determination could be made from the poor image. (R.5121–22). Lightening up the image would not aid him in interpreting that poor image. (R.5123). But upon viewing the TIFF image (Pet. PC Ex. 9), Dr. Zimmerman was able to testify to a reasonable degree of radiological certainty that no skull fracture was present. (R.5123–24). The images Dr. Zimmerman reviewed in his career were usually in TIFF uncompressed format. (R.5123).

Dr. Zimmerman further explained that subgaleal, subarachnoid, and subdural hemorrhages were not exclusively indicative of abusive head trauma. (R.5130). Subgaleal, subarachnoid, and subdural injuries are common in accidental falls of children and can occur through self-inflicted head banging. (R.5130).

Dr. Zimmerman authored medical studies and articles noting a linear skull fracture is a significant finding toward a diagnosis of abusive head trauma. (R.5131). Dr. Zimmerman testified the skull fracture should be visible in the x-ray. (R.5131). He testified unequivocally that it would have been impossible for someone to have examined B.K.'s skull and touched a fracture because no fracture was present on the x-ray saved in the TIFF format.⁵ (R.5131; Pet. PC Ex. 9).

⁵ No witness at the evidentiary hearing would rebut this testimony.

Paul Forman, the Lake County Deputy Coroner assigned to B.K.'s case, testified at the hearing on Melissa's post-conviction petition. (R.5074–75). Forman attended the first autopsy of B.K. on January 15, 2009, at about 2:00 p.m. (R.5086) (Pet. PC Ex. 12). Dr. Choi conducted the autopsy and Detective Hyde was present. (R.5086). Forman took x-rays of B.K.'s skull. (R.5078). The x-rays were clear and readable when he presented them to Dr. Choi and Dr. Choi had no issue with their quality. (R.5078–79). In other cases, when Dr. Choi was dissatisfied with the quality of x-rays, he would ask Forman to retake x-rays. (R.5106–07). Prior to the time he left his employment with the Coroner's office, Forman had never been asked to place the x-rays he took of B.K. on a disc. (R.5093).

After Dr. Choi completed the autopsy on January 15, 2009, Forman took the skull to the autopsy sink, washed and scrubbed the inside and outside of the skull, then dried it with a towel, so there was no sticky residue on the skull. (R.5084–85). The brain, having been examined and dissected, was placed with other organs in the viscera bag. (R.5083; Pet. PC Ex. 14). Forman placed the viscera bag, with the dissected brain inside, in the abdomen, then stitched the abdomen closed. (R.5080–81). Finally, Forman stitched up B.K.'s scalp with the skullcap placed within. (R.5084). Forman identified a photograph depicting the sewn-up head. (R.5082–83; Pet. PC Ex. 18). Dr. Choi's first autopsy report did not state a cause of death and simply stated, "[p]ending further studies." (Pet. PC Ex. 12).

The next day, January 16, 2009, Forman met with Coroner Keller and Dr. Montez about the case between 10:30 a.m. and noon at the Lake County Coroner's

Office on the first floor in the administrative area. (R.5087). Forman provided Dr. Montez with the following documents and photographs: Forman's preliminary narrative regarding the case; a copy of the necropsy report filed by Dr. Choi on January 15, 2009; and Dr. Choi's body charts and notes from the January 15, 2009, autopsy. (R.5088). Forman explained to Dr. Montez the scene photographs and the autopsy photographs. (R.5088). When Forman was asked if Dr. Montez examined the body, he specifically said, "Dr. Montez did not view the body." (R.5088). Forman explained that Dr. Montez proceeded to do the following:

Dr. Montez put the folder [of documents] up under his arm, looked at Coroner Keller, asked Coroner Keller what he wanted him, meaning Dr. Montez, to do with this information. Coroner Keller said I would like for you to review it. He told Dr. Montez there would not be a need for a report because he just wants to make sure that Dr. Choi was on the right track with this case because the Task Force had expressed concerns.

(R.5088–89).

If Dr. Montez had examined the body, Forman's job mandated that he would have to accompany Dr. Montez to examine the body. (R.5089). Dr. Montez took documents, but he did not view or examine B.K.'s body. Then, Dr. Montez left the office. (R.5088–89).

A second postmortem exam took place on January 16, 2009, at 4:00 p.m. (R.5090; Pet. PC Ex. 12). Dr. Choi was present with Forman. (R.5091). The rough sutures were still in place when that exam began. (R.5091–92). Forman made the following observations about the condition of B.K.'s body at the beginning of the second post-mortem examination:

[B.K.'s] head [was] still stitched up as it was on January 15 . . . The dissected brain was still in the visceral bag in the abdominal cavity, and the abdominal cavity was sewn shut as [he had] left it on the 15th.

(R.5091–92).

Forman testified that there was no evidence whatsoever that anyone had examined B.K.'s body. (R.5092). Everything was in place just as Forman had left the body on the previous day. (R.5092).

Procedural History

On November 16, 2011, following a jury trial, Melissa was convicted of the first-degree murder (720 ILCS 5/9-1(a)(2) (West 2008)) of 16-month-old B.K. Also, in connection with B.K.'s death, Melissa was convicted of aggravated battery of a child (720 ILCS 5/12-4.3(a) (West 2008)), which merged into the first-degree murder conviction. Melissa was sentenced to 31 years in the Illinois Department of Corrections. (C.596–600; R.4947). Melissa filed a direct appeal, and the Second District Appellate Court affirmed Melissa's conviction and sentence on April 22, 2014. (C.892–943); *People v. Calusinski*, 2014 IL App (2d) 120383-U, *modified upon denial of rehearing (Calusinski I)*. On September 24, 2014, the Illinois Supreme Court denied discretionary review. *People v. Calusinski*, 386 Ill. Dec. 479 (2014).

On June 23, 2015, Melissa filed a timely post-conviction petition. (C.945–1090). The trial court ordered an evidentiary hearing on Melissa's post-conviction petition. After the hearing, the court dismissed Melissa's post-conviction petition on September 30, 2016. (C.1485–535). Melissa filed a timely notice of appeal in the

Illinois Court of Appeals, which affirmed the lower court's dismissal on June 11, 2018. *People v. Calusinski*, 2018 IL App (2d) 160825-U (*Calusinski II*). Melissa petitioned the Illinois Supreme Court for review on July 16, 2018. The Illinois Supreme Court denied discretionary review on September 26, 2018. *People v. Calusinski*, 424 Ill. Dec. 438 (2018).

STANDARD OF REVIEW

Under § 2254(d) of the Anti-Terrorism and Effective Death Penalty Act (AEDPA), a writ of habeas corpus may be granted when the state court's adjudication of the petitioner's claim on the merits:

- (1) resulted in a decision that was contrary to, or involved an unreasonable application of, clearly established Federal law, as determined by the Supreme Court of the United States; or
- (2) resulted in a decision that was based on an unreasonably determination of the facts in light of the evidence presented in the State court proceeding.

28 U.S.C. § 2254(d)(1)–(2). Under § 2254(d)(1), a state-court decision is contrary to clearly established federal law “if the state court applies a rule different from the governing law set forth in [Supreme Court] cases”—in other words, if it applied the wrong legal standard. *Premo v. Moore*, 131 S. Ct. 733, 743 (2011); *Conner v. McBride*, 375 F.3d 643, 649 (7th Cir. 2004) (a state-court decision is contrary to clearly established federal law “if the state court incorrectly laid out governing Supreme Court precedent”). A state court's decision involves an unreasonable application of clearly established federal law “if the state court identifies the correct governing legal rule from [Supreme Court] cases but unreasonably applies it to the

facts of the particular state prisoner's case.” *Williams v. Taylor*, 120 S. Ct. 1495, 1520 (2000).

Under § 2254(d)(2), a state court's decision “involves an unreasonable determination of the facts if it rests upon fact-finding that ignores the clear and convincing weight of the evidence.” *Ward v. Sternes*, 334 F.3d 696, 704 (7th Cir. 2003).

While it is true that AEDPA mandates a degree of deference to the state courts, such “deference does not by definition preclude relief.” *Miller-El v. Cockrell*, 537 U.S. 322, 340 (2003). Instead, federal courts have an “independent obligation to say what the law is.” *Williams*, 120 S. Ct. at 1517 (O'Connor, J., concurring). AEDPA “directs federal courts to attend to every state-court judgment with utmost care, but it does not require them to defer to the opinion of every reasonable state-court judge on the content of federal law. If, after carefully weighing the reasons for accepting a state court's judgment, a federal court is convinced that a prisoner's custody . . . violates the Constitution, that independent judgment should prevail.” *Id.* at 1511 (Maj. Op.).

Following the Supreme Court's decision in *Cullen v. Pinholster*, 131 S. Ct. 1388, (2011), a federal district court considering a habeas petition under § 2254 must engage in a two-step analysis. *Mosley v. Atchison*, 689 F.3d 838, 849–51 (7th Cir. 2012) (describing the analysis). First, it must examine whether the state court acted unreasonably under § 2254(d)(1) or (d)(2) on the basis of the record as developed in state court. If that standard is met, the federal court must then

conduct an independent, *de novo*, review of the constitutional issues to determine whether relief is warranted under § 2254(a). To aid its § 2254(a) analysis, the federal court may conduct an evidentiary hearing.

CLAIMS FOR RELIEF

- I. MELISSA'S 14TH AMENDMENT DUE PROCESS RIGHTS WERE VIOLATED WHEN, THROUGH ITS AGENT, THE STATE DELETERIOUSLY MODIFIED THE X-RAYS SAVED TO THE CORONER'S COMPUTER BEFORE PRODUCING THEM TO MELISSA AND WHEN THE STATE WITHHELD READABLE COPIES OF X-RAYS THAT ESTABLISHED THAT B.K. HAD NOT SUFFERED A SKULL FRACTURE AND THE STATE'S ATTORNEY REPRESENTED TO MELISSA'S ATTORNEY ON THE RECORD THAT THE ONLY X-RAYS TENDERED TO MELISSA BEFORE TRIAL WERE UNREADABLE.**

Melissa was denied her Fourteenth Amendment due process rights where the State, through its agent, reduced the size and quality of the x-ray images saved to the Lake County Coroner's computer before producing them to Melissa. In so doing, the State effectuated a partial disclosure in violation of its disclosure requirement under *Brady*.

Before Melissa's trial, the State possessed readable x-rays that established that B.K.'s skull was not fractured. The absence of a skull fracture profoundly undermined the State's theory that B.K. was the victim of a violent act of abuse and, at the same time, supported Melissa's prior-injury theory. Yet, those favorable, readable x-rays were not disclosed to Melissa. Without the benefit of those x-rays, Melissa was convicted. The non-disclosure of those x-rays violated Melissa's substantive due process rights as set forth in *Brady* and its progeny.

On September 7, 2011, eight weeks before Melissa's trial began, former Lake County Assistant State's Attorney Christen Bishop gave Melissa's trial Attorney, Paul DeLuca, a disc containing three x-ray images. Bishop represented to DeLuca and the court that the images "were not legible or readable." (R.1812–14).

That same day, DeLuca attempted to view the files on the disc. Upon inserting the disc into his office computer and opening the disc's directory, DeLuca observed three image files and other icons. The first image DeLuca observed was very dark but showed what appeared to be a white outline of the top of a skull. The second image DeLuca observed was entirely dark, almost to the point of being black. The third image DeLuca observed appeared very dark but showed B.K.'s lower torso, from around his waist to his feet. Because all three images appeared dark and illegible, DeLuca asked his secretary for assistance. DeLuca attempted to open the other files on the disc, but nothing opened. (R.5036–39)

On September 9, 2011, the State filed a Supplemental Answer to Discovery, which memorialized Bishop's production of a "[CD] with 3 digital x-ray images purporting to be of [B.K.]" and "the program required to view the [x-ray] images." DeLuca and his secretary attempted to open the program required to view the x-ray images, which was saved to the CD tendered by Bishop on September 7, 2011. The program was called TigerView. Neither DeLuca nor his secretary could open it. Because Bishop had represented to him that the images "were not legible or readable," DeLuca undertook no further effort to use TigerView to view the x-ray images before Melissa's trial. (R.5039).

In 2015, the Lake County Coroner's Office located and produced legible copies of the x-rays of B.K. from his autopsy in 2009. These x-ray image files were not dark to the point of illegibility. (R.5040–42). Instead, they were bright and—according to Melissa's experts in post-conviction proceedings—clearly showed there was no fracture in B.K.'s skull. (R.5121–23, 5130–31).

Melissa, in post-conviction proceedings, adduced evidence that the x-ray images delivered to DeLuca had been obfuscated through intentional means. Their quality had been irretrievably reduced and, even when they were modified to appear readable, they were not. Melissa's pediatric neuroradiologist testified at the hearing on Melissa's post-conviction petition (1) the readable x-rays show no fracture in B.K.'s skull, (2) the unreadable x-rays, even when their appearance was improved, were of insufficient quality to support any opinion as to the presence or absence of a skull fracture, and (3) if there was a fracture in B.K.'s skull as described by the State's trial experts, it would appear in the x-ray (R.5121–23, 5130–31).

Thus, the prosecution's delivery of illegible, reduced-size x-ray files offends the principle of due process rooted in the 14th Amendment of the United States Constitution. *Brady*, 373 U.S. 83, 83 S. Ct. 1194 (1963). The state court's decision to the contrary (described herein) constitutes a misapplication of clearly established Federal law and an unreasonable interpretation of the facts.

(a) *Legal Standard*

In *Brady v. Maryland*, 373 U.S. 83, 87 (1963), the United States Supreme Court held that the State violates an accused’s constitutional right to due process by failing to disclose evidence “where the evidence is material either to guilt or to punishment, irrespective of the good faith or bad faith of the prosecution.” *Id.* In *Strickler v. Greene*, the Court set out “the three components or essential elements of a *Brady* . . . claim: ‘The evidence at issue must be favorable to the accused, either because it is exculpatory, or because it is impeaching; that evidence must have been suppressed by the State, either willfully or inadvertently; and prejudice must have ensued.’” *Banks v. Dretke*, 540 U.S. 668, 691 (2004) (quoting *Strickler v. Greene*, 527 U.S. 263, 281–82 (1996)).

“Evidence qualifies as material when there is ‘any reasonable likelihood’ it could have ‘affected the judgment of the jury.’” *Wearry v. Cain*, 136 S. Ct. 1002, 1006 (2016) (quoting *Giglio v. United States*, 405 U.S. 150, 154 (1972)). To prevail on her *Brady* claims, Melissa need not show that she “more likely than not” would have been acquitted had the readable x-rays been tendered; rather, she must show only that the readable x-rays are sufficient to undermine confidence in the guilty verdict. *Smith*, 132 S. Ct. at 630. Additionally, “the Supreme Court has long recognized that suppression of strong and non-cumulative evidence related to the credibility of an important witness is material under *Brady*, at least when the witness’s testimony is critical to the prosecution’s case. *Sims v. Hyatte*, 914 F.3d 1078, 1088 (7th Cir. 2019) (referencing *Kyles v. Whitley*, 514 U.S. 419, 441–42 (1995) and *Wearry*, 136 S. Ct. 1002, 1007 (2016)).

To comply with the *Brady* disclosure requirement, prosecutors have a duty to learn of favorable evidence known to other government actors. *Kyles*, 514 U.S. at 437. The Supreme Court has noted “the special role played by the American prosecutor in the search for truth in criminal trials.” *Strickler*, 527 U.S. at 281. The prosecutor’s interest in a criminal prosecution “is not that it shall win a case, but that justice shall be done.” *Id.* (quoting *Berger v. United States*, 295 U.S. 78, 88 (1935)).

The United States Supreme Court has made it clear that exculpatory evidence need not be evidence that would have produced an acquittal. *Kyles*, 514 U.S. at 434. It need only be evidence “favorable to the accused,” *Brady*, 373 U.S. at 87, and of the nature that it creates a “reasonable probability” that, had the evidence been disclosed to the defense, the result of the proceeding would have been different. *United States v. Bagley*, 473 U.S. 667, 681 (1985). “[A] showing of materiality does not require demonstration by a preponderance that disclosure of the suppressed evidence would have resulted ultimately in the defendant’s acquittal” *Kyles*, 514 U.S. at 434 (citing *Bagley*, 473 U.S. at 682). Stated simply, “[s]uch evidence is favorable to an accused . . . so that, if disclosed and used effectively, it may make the difference between conviction and acquittal.” *Bagley*, 473 U.S. at 676.

The Supreme Court has proscribed prosecutors’ withholding—in good or bad faith—*Brady* material then arguing a defendant should have more diligently sought the withheld evidence. *Banks v. Dretke*, 540 U.S. 668 (2004). In *Banks*, the Supreme Court condemned the State’s argument that the defendant was

responsible for uncovering evidence withheld by the prosecution. *Id.* at 695. The Court reasoned, “Our decisions lends no support to the notion that defendants must scavenge for hints of undisclosed *Brady* material when the prosecution represents that all such material has been disclosed.” *Id.*

That State here nevertheless urges, in effect, that “the prosecution can lie and conceal and the prisoner still has the burden to . . . discover the evidence,” . . . so long as the “potential existence” of a prosecutorial misconduct claim might have been detected A rule thus declaring “prosecutor may hide, defendant must seek,” is not tenable in a system constitutionally bound to accord defendants due process.

Id. at 696.

(b) *State-court ruling*

In the Illinois state courts, Melissa raised the prosecution’s non-disclosure of legible x-rays and disclosure of deleteriously modified x-ray images as a Fourteenth Amendment due process claim under *Brady v. Maryland*, 373 U.S. 83, 83 S. Ct. 1194 (1963), and its progeny. In *Brady*, the United States Supreme Court proscribed the suppression of evidence favorable to the accused by the state and held that a defendant’s right to due process of law is violated by such suppression. *Id.* at 87.

Melissa argued in the Illinois state courts that the disclosure of illegible and compressed x-ray images in JPEG format constituted a violation of *Brady* and deprived her of her Fourteenth Amendment right to due process of law. In state court, as she does here, Melissa argued that *Brady* requires disclosure of exculpatory information, not just exculpatory documents and tangible things. *See Bagley*, 473 U.S. at 677 (“The constitutional error, if any, in this case was the

Government's failure to assist the defense by disclosing information that might have been helpful in conducting the cross-examination.”).

The Illinois Court of Appeals rejected Melissa's arguments on the sole basis that the TIFF file format x-rays were not material for purposes of *Brady* analysis. (*Calusinski II*, 2018 IL App (2d) 16085-U, ¶¶ 89–101; Exhibit J_25–29). The Court of Appeals did not render a holding with respect to Melissa's claim that the prosecution withheld the legible x-rays. (*Id.* at ¶ 88; Exhibit J_25). Specifically, the Court of Appeals found “[Melissa] has not shown that the TIFF skull image would put the whole case in such a different light as to undermine confidence in the verdict.” (*Id.* at ¶ 101; Exhibit J_29). In so doing, the State court improperly employed a sufficiency of evidence analysis to weigh the materiality of Melissa's expert's opinion that B.K.'s skull was not fractured based upon their review of the legible x-ray images. Specifically, the Court of Appeals rejected Dr. Zimmerman's testimony because it could not re-weigh the evidence pertaining to the skull fracture in reliance on the Illinois Court of Appeals' decision in *People v. Sims*, 374 Ill. App. 3d 231 (2007). (*Calusinski II*, 2018 IL App (2d) 160825-U at 92–101; Exhibit J_26–27). In *Sims*, the issue before the Court of Appeals was whether the court could re-weigh evidence adduced at trial considering a subsequent expert opinion (based upon the same information used to render the render the expert opinion at trial) to determine whether the trial evidence was sufficient to establish guilt beyond a reasonable doubt. *Sims*, 374 Ill. App. 3d at 251. The Illinois Court of Appeals

declined to re-weigh the evidence and concluded that the medical opinion adduced at trial was sufficient to sustain guilt beyond a reasonable doubt. *Id.*

Thus, in *Sims*, the Court of Appeals applied a sufficiency of evidence analysis. The sufficiency of evidence question is “whether, after reviewing the evidence in the light most favorable to the State, any rational trier of fact could have found the essential elements of the crime beyond a reasonable doubt.” *Jackson v. Virginia*, 443 U.S. 307, 318–19 (1970).

Melissa should not be bound by the much more rigorous sufficiency-of-evidence standard in determining the materiality of her *Brady* claim. The leading Supreme Court case on the issue of materiality is *Kyles*, 514 U.S. 419 (1995). The *Kyles* Court noted “the question is not whether the defendant would more likely than not have received a different verdict worthy of confidence.” *Id.* at 434–38; *Smith v. Cain*, 132 S. Ct. 627, 630 (2012). A “reasonable probability” is lower than a preponderance of evidence standard. A reasonable probability is demonstrated where the defense shows that the failure “undermined confidence” in the conviction. *Youngblood v. West Virginia*, 547 U.S. 867, 869–70 (2006).

Under no possible line of reasoning is the sufficiency of evidence standard relevant to whether the legible x-rays were material—i.e., whether they undermined confidence in Melissa’s conviction. By applying the incorrect legal standard, the Illinois Court of Appeals acted contrary to clearly established federal law under § 2254(d)(1).

As discussed herein, the prosecution's nondisclosure of exculpatory and favorable x-rays deprived Melissa of her right to due process under the substantive due process rights announced in *Brady* and its progeny. The prosecution should not be permitted to act with impunity in a system where "prosecutor may hide, defendant must seek." *Banks*, 540 U.S. at 696. The State courts' conclusions to the contrary involves both an unreasonable application of clearly established Federal law and an unreasonable determination of the facts. Melissa's convictions must therefore be vacated.

(c) *The legible x-rays were withheld for purposes of Brady analysis.*

To comply with the *Brady* disclosure requirement, prosecutors have a duty to learn of favorable evidence known to other government actors. *Kyles*, 514 U.S. at 437. The Supreme Court has noted "the special role played by the American prosecutor in the search for truth in criminal trials." *Strickler*, 527 U.S. at 281. The prosecutor's interest in a criminal prosecution "is not that it shall win a case, but that justice shall be done. *Id.* (quoting *Berger v. United States*, 295 U.S. 78, 88 (1935)).

In *Kyles*, the United States Supreme Court held that, to comply with *Brady*, the prosecution bears the duty to learn of favorable evidence known to other government actors. The Coroner's office and its agents are properly considered government actors under the Supreme Court's formulation in *Kyles*. Therefore, knowledge that readable x-rays were saved to the Coroner's computer in 2009 is imputed to the prosecutors in Melissa's case. Because the prosecutors in Melissa's

case did not tender the readable x-rays to Melissa before trial, they were withheld for purposes of *Brady* analysis. Because—as set forth herein—the readable x-rays are material and their nondisclosure prejudiced Melissa, the prosecution violated *Brady* when it withheld them.

As discussed herein, readable x-rays were saved to the Coroner's computer in 2009. The Coroner's possession of such images should be imputed to the State's attorney for *Brady* purposes in this case. *See, e.g., Junta v. Thompson*, 615 F.3d 67, 74 (1st Cir. 2010) (assuming documents in the possession of the medical examiner's office are subject to *Brady* disclosure requirements). Here, the Coroner's office worked in tandem with the prosecution from the inception of the investigation. State expert Dr. Choi conducted two autopsies pursuant to his duties with the Coroner's office. (R.3559, 3562–63, 5092). A police investigator was present for both autopsies. (R.5086). As the examiner gathered information during the autopsies, such information was relayed to the detectives who were interrogating Melissa. (R.4036–38, 4046–47). With law enforcement present, Dr. Choi and the Coroner's office conducted experiments dictated by information provided by the interrogating detectives. State rebuttal expert Dr. Montez stated that he worked with the Coroner's office to formulate his opinions in the case. Bishop advised the trial court that she was working with the Coroner's office to determine whether the illegible and unreadable x-rays could be improved. Therefore, under the circumstances of this case, the evidence supports the conclusion that the Coroner's

office functioned, intentionally or otherwise, as an agent of the prosecution in this case.

Moreover, Melissa's right to due process was plainly violated when the prosecution tendered DeLuca illegible x-ray image files on September 7, 2011, saved as compressed, incomplete, and irretrievably obfuscated JPEG image files. The legible x-ray image files produced by the Lake County Coroner's Office in 2015 were saved in TIFF file format. The TIFF file format is uncompressed and contains all underlying data. In stark contrast, the JPEF image files delivered to defense counsel in open court were compressed and contained very little data. Indeed, the sizes of the JPEG image files DeLuca received in 2011 were approximately 2% of the sizes of the TIFF image files saved on the Coroner's computer in 2009.

At the evidentiary hearing on her post-conviction petition, Melissa presented Jeffrey Mueller as an expert in the field of software engineering with a specialty in imaging. Mueller testified he reviewed the images Bishop gave to DeLuca in 2011, which he identified as being saved as JPEG image files. (R.5400, 5486). Mueller also reviewed the image files that Dr. Shaku Teas, an expert with whom DeLuca consulted, reviewed. (R.5448–50). Mueller identified these images were saved as JPEG files. (R.5450). Mueller review the image files from the Coroner's computer, which were saved in TIFF file format. (R.5400–01).

Mueller testified the amount of data contained in the JPEG image files given to DeLuca in 2011 was a small percentage of the data contained in the TIFF image files on the Coroner's computer. (R.5403, 5406–08). Mueller testified the JPEG

images given to DeLuca in 2011 had been compressed significantly. (R.5401–02). In contrast, the TIFF images saved to the Coroner’s computer in 2009 were “uncompressed and [of] highest quality.” (R.5407).

During his testimony at the hearing on Melissa’s post-conviction petition, Mueller demonstrated a comparison of the JPEG images given to DeLuca in 2011 and the corresponding TIFF images saved to the Coroner’s computer in 2009. (R.5439–42). The comparison included the metadata for all images. Metadata conveys information related to file properties including file size, file type, and creation date. The size of the TIFF files on the Coroner’s computer were approximately 17,800 kilobytes, 16,600 kilobytes, and 17,200 kilobytes, respectively. (R.5406–08). All three TIFF images saved to the Coroner’s computer were created on January 15, 2009, the date of B.K.’s autopsy. (R.5406–09).

In stark contrast, the three JPEG image files Bishop gave DeLuca had file sizes of 267 kilobytes, 411 kilobytes, and 979 kilobytes, respectively. (R.5403). This data compression amounts to the loss of approximately 98% of the data contained in the TIFF image files saved to the Coroner’s computer. The JPEG images tendered to DeLuca were created on September 6, 2011. (R.5436).

Using the TigerView software made available to DeLuca with the JPEG images in September 2011, Mueller improved the quality of the TIFF images saved to the Coroner’s computer in 2009. (R.5439–42). Mueller could not, however, improve the quality of the JPEG images tendered to DeLuca in September 2011 using the same software. Mueller explained to the court that he could not improve

the quality of DeLuca's images because the images were exported as extremely low-quality JPEF files and were modified further before they were tendered to DeLuca. (R.5443).

Mueller demonstrated to the trial court how the very poor quality of the DeLuca images was created prior to being exported as a JPEG image file and tendered to DeLuca. Mueller modified one of the TIFF images from the Coroner's computer by reducing the window width to a value of three—thereby increasing the contrast to the point that only pure white and dark grey/black were visible—and exporting the image as a JPEG file with lowest quality settings. It was only after taking these steps that Mueller could replicate the low quality and small file size present in the DeLuca image files. Based upon his expertise and experience, Mueller concluded that, in addition to being exported as low-quality JPEG files, the images on the Coroner's computer had been deliberately degraded using image editing software. Specifically, Mueller explained that the only way to reduce the quality of the x-ray images to the same degree as the DeLuca JPEGs was by (1) exporting the TIFF image file as a low quality (i.e., highly compressed) JPEG image, (2) opening the resulting JPEG image in a separate image editing software, (3) darkening and reducing the quality of that JPEG image, and (4) exporting the image again as a low quality JPEG image. Only after taking these steps was Mueller able to substantially recreate the JPEG images Bishop tendered DeLuca in 2011. (R.5443–46).

In *Bagley*, the prosecution disclosed *misleading* information—what might be deemed “half-truths.” The United States Supreme Court concluded that such a disclosure violated *Brady*. *Bagley*, 473 U.S. at 682 (“[A]n incomplete response to a specific request not only deprives the defense of certain evidence, but also has the effect of representing to the defense that the evidence does not exist. In reliance on this misleading representation, the defense might abandon lines of independent investigation, defenses, or trial strategies that it otherwise would have pursued.”).

In *Bagley*, the defense attorney had asked for disclosure of any inducements made to witnesses. *Id.* at 669–70. The prosecutor failed to disclose that the *possibility* of a reward had been held out to the witnesses. *Id.* at 670–71. Instead, the prosecution provided affidavits from the witnesses stating that they had received no “deals, promises or inducements” for reward in return for information. *Id.* at 670.

The *Bagley* Court held that such a disclosure was insufficient. *Id.* at 684 (“While the government is technically correct that the blank contracts did not constitute a ‘promise of reward,’ the natural effect of these affidavits would be misleading to induce defense counsel to believe that [the witnesses] provided the [inculpatory] information without any ‘inducements.’”). *Bagley* made clear that *Brady* is violated when the prosecution makes a partial disclosure that misleads defense counsel into believing that no further exculpatory evidence as to a certain issue exists.

Here, the partial disclosure of illegible x-ray images misled DeLuca into believing no other x-ray images existed. This conclusion is supported by Bishop's statement on the record that the x-rays were saved to the CD she tendered DeLuca, that the x-rays were unreadable, and that the State's Attorney's Office was working to improve their quality. The State's Attorney's Office never provided DeLuca with readable x-rays before trial and never gave DeLuca notice that they were actively pursuing improved x-rays. Here, the State's partial disclosure plainly induced DeLuca into reliance on its misleading representation. In reliance on the State's misleading representation, DeLuca abandoned lines of independent investigation, defense and trial strategies that he otherwise would have pursued. *See, Bagley* 473 U.S. at 682.

- (d) *The State-court ruling that the legible x-rays were not material is contrary to clearly established federal law and involves an unreasonable interpretation of the facts.*

"Evidence qualifies as material when there is 'any reasonable likelihood' it could have 'affected the judgment of the jury.'" *Wearry* 136 S. Ct. at 1006 (quoting *Giglio*, 405 U.S. at 154). To prevail on her *Brady* claims, Melissa need not show that she "more likely than not" would have been acquitted had the readable x-rays been tendered; rather, she must show only that the readable x-rays are sufficient to undermine confidence in the guilty verdict. *Smith*, 132 S. Ct. at 630. Additionally, "the Supreme Court has long recognized that suppression of strong and non-cumulative evidence related to the credibility of an important witness is material under *Brady*, at least when the witness's testimony is critical to the prosecution's

case. *Sims v. Hyatte*, 914 F.3d 1078, 1088 (7th Cir. 2019) (referencing *Kyles*, 514 U.S. at 441–42 (1995) and *Wearry*, 136 S. Ct. at 1007 (2016)).

The testimony and argument about the skull fracture cannot be deemed immaterial. Multiple witnesses testified that B.K.’s skull was fractured throughout the pre-trial proceedings. (R.157–59, 360, 604–05, 675–77, 1010, 1303, 1586, 1589). In its opening statement at trial, the prosecution explained that Dr. Choi would advise the jury about the “skull fracture” he found “on the top right part of [B.K.’s] head.” (R.2606). Additional witnesses, including numerous physicians, testified repeatedly about the skull fracture. (R.3293, 3297–98, 3441, 3460–61, 3472, 3474, 3475–76, 3580–81, 3583, 3585–88, 3635–36, 3674, 3809, 3903, 3994, 4519–21, 4527–30, 4536, 4553–54, 4587). The State continued to emphasize the skull fracture in closing arguments. (R.4697–98, 4715). The State argued that Melissa “threw [B.K.] to the ground. Cracked [B.K.’s] head. Fractured.” (R.983).

In total, the words “skull fracture” were uttered 93 times at Melissa’s trial. The word “fracture” alone was mentioned 284 times. The skull fracture was mentioned ten times during Melissa’s interrogation; the interrogation—and the statements elicited from Melissa therein—must be evaluated considering the readable x-rays showing no such fracture. In the interrogation, the investigators repeatedly advised Melissa that B.K.’s skull had been fractured. Only after these repeated declarations did Melissa make incriminating statements. The now-known fact that B.K.’s skull was not fractured would have provided Melissa with powerful evidence to establish that her statements were not rooted in reality. Rather, any

and all inculpatory statements stemmed solely from the investigators' repeated declarations that B.K.'s skull had been fractured. This knowledge alone bears a significant likelihood of a different outcome.

In this case, the pre-trial production of readable x-rays likely would have led to a different outcome at trial because (1) they were exculpatory of Melissa and (2) they rebutted and impeached the State's experts' testimony.

(i) *The readable x-rays were exculpatory of Melissa*

"The evidence at issue must be favorable to the accused, either because it is exculpatory, or because it is impeaching." *Srickler*, 527 U.S. at 281–82. In this case, the readable x-rays were both exculpatory of Melissa and impeaching of Dr. Montez. The readable x-rays exculpate Melissa because they show no skull fracture; the absence of a skull fracture cuts strongly against Dr. Choi's diagnosis of abusive head trauma. Had the legible x-rays been tendered to him before Melissa's trial, DeLuca would have hired a pediatric neuroradiologist to determine whether or not there was a skull fracture. The pediatric neuroradiologist would have determined there was no skull fracture and rendered a diagnosis of cerebral edema arising from repeated occurrences of head-banging. Such a diagnosis is favorable to Melissa because if B.K. died as a result of accidental or self-inflicted head trauma, the crime of Melissa's conviction never occurred. Thus, such evidence is directly exculpatory.

The Illinois Court of Appeals reasoned that Dr. Zimmerman's opinion that the readable x-rays showed no fracture in B.K.'s skull presented an insufficient

likelihood of a new outcome when taken in light of the opinions of the State's experts at trial. (*Calusinski II*, 2018 IL App (2d) 160825-U at ¶ 101; Exhibit J_29). Drs. Choi and Montez both saw the alleged fracture with their naked eyes and Dr. Montez testified he felt the fracture without gloves. (5420–21). Other trial experts testified they saw the alleged fracture in autopsy photographs but relied upon Dr. Choi's autopsy assessment that B.K.'s skull was fractured. (R.3720–21, 4214–17). None of these experts, except Dr. Choi, had occasion to view the films taken on January 15, 2009. Indeed, Dr. Choi, when confronted by the readable x-ray evidence, admitted he had been wrong and the cause of B.K.'s death was re-aggravation of an existing injury. (Exhibit G_127–128).

Thus, the Court of Appeals's decision involves an unreasonable determination of the facts. The facts relied upon by the State's experts at trial did not include the readable x-rays examined by Dr. Zimmerman. Because none of the State's experts considered the readable x-ray images in formulating their opinions about the presence of the alleged skull fracture, their trial opinions cannot now rebut Dr. Zimmerman's conclusions. Thus, it was manifestly unreasonable for the Court of Appeals to find Melissa's evidence—which demanded the conclusion there was no skull fracture—was not likely to change the outcome of her trial. It would be another matter if, for instance, the State presented its experts at the hearing on Melissa's post-conviction and they testified that, even after reviewing the readable TIFF x-ray images reflecting the opposite, there was a fracture in B.K.'s skull. The State adduced no such testimony at the hearing. Thus, Dr. Zimmerman's testimony

is unrebutted and—especially because his opinions are based upon evidence not considered by the State’s experts—bear a significant likelihood of changing the outcome of trial.

(ii) *The readable x-rays rebutted and impeached the State’s experts’ testimony.*

Moreover, the readable x-rays would have rebutted the State’s experts’ testimony. Armed with the readable x-rays, DeLuca would have solicited expert opinions that contradicted the testimony of various witnesses, including Dr. Choi, that there was a skull fracture. After all, Dr. Choi had testified at trial that the x-rays were not legible, that he could not identify a skull fracture in the x-rays, but that he knew there was a skull fracture because he had observed it with the naked eye.

Additionally, with a pediatric neuroradiologist confirming there was no fracture, DeLuca could have refuted the accuracy of Melissa’s reenactment in her filmed confession. Although DeLuca discussed the reliability of Melissa’s reenactment in the filmed confession with his medical experts, the experts could not dispute the reenactment because they did not have x-rays that showed no skull fracture. Armed with medical opinions that refuted the accuracy of Melissa’s reenactment, DeLuca could have effectively contradicted the reliability of every inculpatory statement Melissa made.

Lastly, the readable x-rays are material because their disclosure would have permitted DeLuca to impeach the testimony of the State’s rebuttal expert Dr. Montez. As described herein, Dr. Montez testified in rebuttal that he digitally

manipulated B.K.'s skull on January 16, 2009, and that he felt with his fingers the alleged skull fracture. (R.4520–21). Because the readable x-rays demonstrated that there was, as a matter of fact, no fracture in B.K.'s skull, Dr. Montez's testimony as to its existence was untrue. Evidence derived from the readable x-rays—i.e., that there was no fracture in B.K.'s skull—directly impeaches Dr. Montez's testimony; Dr. Montez could not have felt with his fingers a non-existent injury. Because the readable x-rays directly impeach Dr. Montez's testimony, they are properly deemed material for purposes of *Brady* analysis.

In *Sims*, the Seventh Circuit revisited *Brady* materiality in cases of non-disclosure of impeaching evidence. The Seventh Circuit reasoned: “[T]he Supreme Court has long recognized that suppression of strong and non-cumulative evidence related to the credibility of an important witness is material under *Brady*, at least when the witness's testimony is critical to the prosecution's case.” *Sims*, 914 F.3d at 1088.

In this case, Dr. Montez was an important witness whose testimony was critical to the prosecution's case. To wit, Dr. Montez's testimony was critical because the prosecution relied upon Dr. Montez to establish the manner of B.K.'s death based upon his alleged observation of a skull fracture. According to Dr. Montez, the presence of a skull fracture meant that B.K. had been the victim of a violent, intentional throw to the ground with significant force. Dr. Montez ruled out that the apparent head injury was self-inflicted or accidental. No other witness at Melissa's trial linked the alleged skull fracture to a violent throw to the ground,

which, by implication, linked Melissa to the alleged violent act described by Dr. Montez.⁶

Moreover, evidence adduced from the readable x-rays—i.e., there was no skull fracture—was strong and non-cumulative. First, the evidence that there was no skull fracture was strong. Dr. Zimmerman testified at the hearing on Melissa’s post-conviction petition as an expert in pediatric neuroradiology. (R.5114, 5116). Dr. Zimmerman testified to a reasonable degree of radiological certainty that no fracture was present in B.K.’s skull. (R.5123–24). Dr. Zimmerman further explained that the symptomology identified at autopsy—excluding the alleged fracture—was not exclusively indicative of abusive head trauma. (R.5130). Subgaleal, subarachnoid, and subdural injuries are common in accidental falls of children and can be caused by self-inflicted head-banging injuries. (R.5130). Dr. Zimmerman testified that if there was a fracture in B.K.’s skull, he would have observed it in the readable x-rays. Lastly, Dr. Zimmerman testified unequivocally that it would have been impossible for someone to have examined B.K.’s skull and touched a fracture because no fracture was present in the readable x-ray saved to the Coroner’s computer. (R.5131). The readable x-ray evidence was strong evidence in favor of Melissa because (1) it directly contradicted the prosecution’s theory on the manner of B.K.’s death, and (2) it supported a theory consistent with Melissa’s actual innocence, i.e., that B.K.’s injuries had been accidental or self-inflicted.

⁶ In her custodial interrogation, Petitioner made statements indicating she threw B.K. to the ground. The jury was presented with evidence of Petitioner’s statements. Petitioner adamantly denies the veracity of these statements. Petitioner litigated the issue her coerced, involuntary, and unreliable statements in the Illinois courts. *See* Exhibits A_57–66; C_3–7; E_13–17.

The evidence adduced from the readable x-rays was—far from cumulative—entirely novel. There was no evidence presented at trial that so much as suggested there was, in fact, no fracture to B.K.’s skull. Indeed, defense counsel was precluded from pursuing this line of evidence by the prosecution’s non-disclosure of readable x-rays. Therefore, in addition to being strong evidence, the evidence that there was no fracture to B.K.’s skull is non-cumulative.

The prosecution’s nondisclosure of exculpatory and favorable x-rays deprived Melissa of her right to due process. The State courts’ conclusions to the contrary involve both an unreasonable determination of clearly established Federal law and an unreasonable determination of the facts under *Brady* and § 2254(d)(1) and (2). Therefore, habeas relief is appropriate.

II. MELISSA WAS DENIED HER DUE PROCESS RIGHTS WHERE THE STATE SECURED HER CONVICTION THROUGH THE KNOWING USE OF PERJURY.

Melissa was denied her 14th Amendment due process rights where the State secured her conviction through the knowing use of perjury when it presented Dr. Manuel Montez as a rebuttal witness. Dr. Montez testified that he went to the Lake County Coroner’s office on January 16, 2009, to consult on B.K.’s autopsy. The State court’s ruling to the contrary involves an unreasonable determination of the facts.

At trial, Dr. Montez testified in surrebuttal that he came to the Lake County Coroner’s office on January 16, 2009, as a consultant on B.K.’s autopsy. (R.4575–76). According to Dr. Montez, Deputy Coroner Paul Forman and Investigator Mike

Young were present at the time of his alleged examination of B.K.'s body. (R.4575). Dr. Montez testified that he saw the skull and felt the fracture. (R.4520). Dr. Montez went on to render the opinion that, based upon his assessment of the skull fracture, B.K. was the victim of a violent, intentional throw to the ground with significant force. Dr. Montez ruled out that the apparent head injury was self-inflicted or accidental. Dr. Montez also testified that he examined B.K.'s scalp and the bleeding he observed thereon. (R.4542–42).

At the hearing on Melissa's post-conviction petition, Dr. Zimmerman testified that, based upon his review of the TIFF x-ray images saved to the Coroner's computer in 2009, there was no fracture present in B.K.'s skull. (R.5423–24). Dr. Zimmerman testified unequivocally that it would have been impossible for someone to have examined B.K.'s skull and touched a fracture because no fracture was present. (R.5130–31).

Deputy Coroner Forman also testified at Melissa's evidentiary hearing. Forman testified that—in direct contravention of Dr. Montez's trial testimony—Dr. Montez did not examine B.K.'s body. Specifically, Forman testified he remembered meeting with Dr. Montez and Lake County Coroner Keller on January 16, 2009, in reference to B.K.'s autopsy. (R.5087). Forman provided Dr. Montez with his preliminary narrative regarding the case, a copy of the report authored by Dr. Choi the previous day regarding the autopsy of B.K., and Dr. Choi's body charts and notes from the January 15, 2009, autopsy. (R.5088). Dr. Montez did not examine B.K.'s body. (R.5088). Had Dr. Montez actually viewed B.K.'s body, Forman would

have accompanied Dr. Montez in conformity with his duties as deputy coroner. (R.5089). Forman testified that Dr. Montez took the documents but at no time examined B.K.'s body before leaving the Coroner's office. (R.5088–89).

Moreover, Forman would have known if Dr. Montez had examined B.K.'s body outside his presence on January 16, 2009. B.K.'s brain was removed and dissected during Dr. Choi's first autopsy examination on January 15, 2009. At the conclusion of that autopsy, the brain was placed in a viscera bag, which was then placed in the abdomen. With the brain inside, Forman stitched the abdomen closed. Forman then placed the skull cap—which has been removed and examined—in place and stitched together the scalp. (R.5090–92). Additionally, Dr. Montez's testimony that he observed blood below the scalp is flatly contradicted by Forman's testimony that he had washed the skull after Dr. Choi scraped it on January 15, 2009. (R.5084).

After Dr. Montez left the Lake County Coroner's office on January 16, 2009, Dr. Choi and Forman began the second autopsy of B.K. At the beginning of the January 16 autopsy, both the abdomen and scalp were stitched closed with the same sutures Forman had placed the day before. (R.5090–92). Dr. Montez could not have examined B.K.'s skull and brain without cutting Forman's sutures.

Based upon Dr. Zimmerman's medical conclusions and Forman's testimony, it is clear that Dr. Montez—in complete contradiction to his testimony at Melissa's trial—never examined B.K.'s body on January 16, 2009. Therefore, Dr. Montez committed perjury. Because Dr. Montez, in his capacity as a consultant and

witness for the State, was an agent of the prosecution, his knowledge must be imputed to the prosecution. Thus, the prosecution, when it presented Dr. Montez and failed to correct his untrue testimony, suborned perjury. Dr. Montez's untrue testimony as to the manner of B.K.'s death—which was supported by his untrue testimony that he observed a fracture in B.K.'s skull on January 16, 2009, caused Melissa's conviction. Therefore, the State violated Melissa's due process rights. The State court's conclusion to the contrary constitutes a misapplication of clearly established Federal law and an unreasonable application of the facts.

(a) *Legal Standard*

The State's knowing use of perjured testimony to obtain a criminal conviction violates a defendant's Fourteenth Amendment right to due process of law. *Napue*, 360 U.S. at 269. The same principles apply when the State, although not soliciting false evidence, allows it to go uncorrected when it appears. *Id.* (citing *Alcorta v. Texas*, 355 U.S. 28, (1957)). Nor does it matter that the witness's false testimony goes only to that witness's false credibility; the resulting conviction is nonetheless tainted when the subject of the perjured testimony is in any way relevant to the case. *Id.* at 269–70. This is so because “[t]he jury’s estimate of the truthfulness and reliability of a given witness may well be determinative of guilt or innocence, and it is upon such subtle factors as the possible interest of the witness in testifying falsely that a defendant’s life or liberty may depend.” *Id.* at 269.

Due process claims are cognizable where there has been knowing use of perjured testimony on the part of the “prosecuting authorities.” *United States v.*

Jakalski, 237 F.2d 503, 504–05 (7th Cir. 1956) (citing *Mooney v. Holohan*, 294 U.S. 103 (1935)). “[A] constitutional due process claim would not be defeated merely because the prosecuting attorney was not personally aware of [the factual basis of the perjury claim].” *Schneider v. Estelle*, 552 F.2d 593, 595 (5th Cir. 1977) (citing *Smith v. Florida*, 410 F.2d 1349, 1351 (5th Cir. 1969)); *Barbee v. Warden*, 331 F.2d 842, 846 (4th Cir. 1964); *Curran v. Delaware*, 259 F.2d 707, 713 (3d Cir. 1958); *Pyle v. Kansas*, 317 U.S. 213 (1942)).

(b) *State-court ruling*

In the Illinois state courts, Melissa raised the prosecution’s subornation of Dr. Montez’s perjury as a Fourteenth Amendment due process claim under *Napue*.

Ruling on Melissa’s post-conviction petition after the hearing, the trial court found that Melissa’s perjury claim was based solely upon the evidentiary hearing testimony of Forman. (C.1518; Exhibit H_34). The trial court found Forman testified that he stitched B.K.’s skull together after the first autopsy on January 15, 2009. Forman testified that, contrary to Dr. Montez’s trial testimony, he had physically examined the body and actually touched the fracture on B.K.’s skull, when he actually had not. (C.1518; Exhibit H_34).

The trial court found that Forman’s testimony was refuted by the testimony of Mr. Thomas, who attended the second examination with Forman and Dr. Choi on January 16, 2009. (Exhibit H_35). The trial court focused on Mr. Thomas’s testimony that he observed that the skull cap was removed and saw no visible stitching marks. (Exhibit H_35). The trial court also found that Forman was

impeached by his statement that he took five x-rays of B.K.'s body on January 15, 2009, with other statements that he took two x-rays (C.1519; Exhibit H_35). The trial court also noted that it had the opportunity to observe and evaluate Dr. Montez's trial testimony. (C.1519; Exhibit H_35). Without further explanation, the trial court ruled that "[Melissa] has failed to present credible evidence showing a constitutional deprivation based upon perjured testimony." (C.1520; Exhibit H_36).

The Illinois Court of Appeals rejected Melissa's argument on the basis that Forman's testimony was not credible (*Calusinski II*, 2018 IL App (2d) 160825-U at ¶ 62; Exhibit J_17) and that Dr. Zimmerman's opinion that there was no fracture in B.K.'s skull was insufficient to prove the absence of a skull fracture and, therefore, Dr. Montez testified truthfully. (*Calusinski II*, 2018 IL App (2d) 160825-U at ¶¶ 71–73; Exhibit J_20–21). The Illinois Court of Appeals's conclusion that Melissa's evidence was insufficient to show Dr. Montez's testimony was untruthful involves an unreasonable determination of the facts. Therefore, habeas relief is appropriate.

(c) ***The state-court ruling involved an unreasonable determination of the facts in light of the evidence presented in the state-court proceedings.***

The Illinois Court of Appeals identified in its order the logic underlying Melissa's subornation of perjury claim:

Dr. Zimmerman testified that there was no skull fracture because it did not show up on the [x]-ray; therefore, Dr. Montez could not have felt and manipulated a fracture; therefore, Dr. Montez was not truthful.

(*Calusinski II*, 2018 IL App (2d) 160825-U at ¶ 71; Exhibit J_20). According to the Court of Appeals, this line of reasoning is tantamount to arguing "that Dr. Montez committed perjury because Dr. Zimmerman disagreed with him." (*Calusinski II*,

2018 IL App (2d) 160825-U at ¶ 71; Exhibit J_20). This finding is unreasonable in light of the facts adduced in Melissa's post-conviction proceedings.

To wit, Melissa adduced evidence at the hearing on her post-conviction petition that definitively proved there was no fracture in B.K.'s skull. Dr. Zimmerman testified that, had there been a fracture in B.K.'s skull, it would be visible in the readable x-rays. (R.5131). Indeed, Dr. Zimmerman testified that, based upon the readable x-ray image, there was no fracture in B.K.'s skull. (R.5123–24). Dr. Zimmerman testified unequivocally that it would have been impossible for someone to have examined B.K.'s skull and touched a fracture—as Dr. Montez testified—because no fracture was present on the readable x-ray. (R.5131).

Thus, Dr. Zimmerman's opinion is not merely a rebuttal of Dr. Montez's trial testimony; instead, Dr. Zimmerman's opinion is based upon evidence withheld from Melissa's trial—i.e., the readable x-rays. As such, Dr. Zimmerman's opinion is qualitatively distinct from that rendered by Dr. Montez. Dr. Zimmerman's conclusion that there was no fracture in B.K.'s skull stands unrebutted. Thus, the Court of Appeals' reasoning that Dr. Zimmerman was simply offering a countervailing medical opinion is patently unreasonable.

Moreover, Forman's evidentiary hearing testimony lends strong support to Dr. Zimmerman's conclusion. Forman testified Dr. Montez never examined B.K.'s body in his presence and, in conformity with his office as the deputy medical examiner assigned to B.K.'s case, Forman was obligated to attend any such

examination. (R.5087–89). Moreover, Forman had stitched up B.K.’s scalp—with the scraped and washed skullcap within—at the conclusion of the January 15, 2009, autopsy. (R.5091–92). After Dr. Montez’s visit to the Lake County Coroner’s office on January 16, 2009, Dr. Choi, assisted by Forman, began the second autopsy. (R.5092). At that time, everything was in place just as Forman had left it the day before. (R.5092).

Thus, Forman strongly corroborates Dr. Zimmerman’s testimony; Dr. Montez testified untruthfully about the presence of a fracture in B.K.’s skull because he never examined it. The Illinois court’s conclusion to the contrary constituted an unreasonable determination of the facts in light of the state-court proceedings.

The prosecution’s knowing use of perjured testimony deprived Melissa of her right to due process. The State courts’ conclusions to the contrary involved an unreasonable determination of the facts under § 2254(d)(2). Therefore, habeas relief is appropriate.

CONCLUSION

For the reasons stated herein and in Melissa's separately filed petition for writ of habeas corpus, Melissa respectfully requests this Court grant the writ, discharge her from her unconstitutional confinement, and grant any and all other relief deemed just and appropriate.

Dated: March 27, 2019

Respectfully submitted,

/s/ Kathleen T. Zellner

KATHLEEN T. ZELLNER

IL Bar No. 6184574

KATHLEEN T. ZELLNER & ASSOCIATES, P.C.

1901 Butterfield Road, Suite 650

Downers Grove, Illinois 60515

P: 630-955-1212

F: 630-955-1111

attorneys@zellnerlawoffices.com

Attorney for Petitioner Melissa Calusinski